

Release notes for ENDF/B Development g-074\_W\_180  
evaluation

**ENDF**  
**B-VII**.dev

December 2, 2016

- checkr Warnings:

1. A previous error halted parsing of the current section  
*MAT=7425, MF= 1, MT=451 (1): Parsing stopped*

```
ERROR(S) FOUND IN MAT=7425, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      74 TO      110
```

- checkr Errors:

1. A variable is outside the allowed ENDF range  
*MAT=7425, MF= 1, MT=451 (0): Variable range*

```
ERROR(S) FOUND IN MAT=7425, MF= 1, MT=451
MOD =      1 OUT OF RANGE      0 -      0      RECORD NUMBER      74
```

2. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 3 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 3
SECTION 3/ 3 NOT IN DIRECTORY      RECORD NUMBER      112
```

3. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 4 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY      RECORD NUMBER      146
```

4. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 16 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY      RECORD NUMBER      177
```

5. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 17 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 17
SECTION 3/ 17 NOT IN DIRECTORY      RECORD NUMBER      195
```

6. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 22 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 22
SECTION 3/ 22 NOT IN DIRECTORY      RECORD NUMBER      203
```

7. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 28 (0): Directory (b)*

- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 28 | RECORD NUMBER | 220 |
| SECTION 3/ 28 NOT IN DIRECTORY            |               |     |
8. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 50 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 50 | RECORD NUMBER | 233 |
| SECTION 3/ 50 NOT IN DIRECTORY            |               |     |
9. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 51 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 51 | RECORD NUMBER | 264 |
| SECTION 3/ 51 NOT IN DIRECTORY            |               |     |
10. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 52 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 52 | RECORD NUMBER | 295 |
| SECTION 3/ 52 NOT IN DIRECTORY            |               |     |
11. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 53 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 53 | RECORD NUMBER | 325 |
| SECTION 3/ 53 NOT IN DIRECTORY            |               |     |
12. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 54 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 54 | RECORD NUMBER | 355 |
| SECTION 3/ 54 NOT IN DIRECTORY            |               |     |
13. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 55 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 55 | RECORD NUMBER | 385 |
| SECTION 3/ 55 NOT IN DIRECTORY            |               |     |
14. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 56 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 56 | RECORD NUMBER | 414 |
| SECTION 3/ 56 NOT IN DIRECTORY            |               |     |
15. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 57 (0): Directory (b)*

- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 57 | RECORD NUMBER | 443 |
| SECTION 3/ 57 NOT IN DIRECTORY            |               |     |
16. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT= 91 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT= 91 | RECORD NUMBER | 472 |
| SECTION 3/ 91 NOT IN DIRECTORY            |               |     |
17. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=102 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=102 | RECORD NUMBER | 500 |
| SECTION 3/102 NOT IN DIRECTORY            |               |     |
18. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=103 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=103 | RECORD NUMBER | 534 |
| SECTION 3/103 NOT IN DIRECTORY            |               |     |
19. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=104 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=104 | RECORD NUMBER | 560 |
| SECTION 3/104 NOT IN DIRECTORY            |               |     |
20. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=105 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=105 | RECORD NUMBER | 576 |
| SECTION 3/105 NOT IN DIRECTORY            |               |     |
21. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=106 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=106 | RECORD NUMBER | 591 |
| SECTION 3/106 NOT IN DIRECTORY            |               |     |
22. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=107 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=7425, MF= 3, MT=107 | RECORD NUMBER | 602 |
| SECTION 3/107 NOT IN DIRECTORY            |               |     |
23. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 3, MT=111 (0): Directory (b)*

- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=7425, MF= 3, MT=111 |               |     |
|  | SECTION 3/111 NOT IN DIRECTORY            | RECORD NUMBER | 634 |
24. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 16 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 16 |               |     |
|  | SECTION 6/ 16 NOT IN DIRECTORY            | RECORD NUMBER | 641 |
25. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 17 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 17 |               |     |
|  | SECTION 6/ 17 NOT IN DIRECTORY            | RECORD NUMBER | 785 |
26. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 22 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 22 |               |     |
|  | SECTION 6/ 22 NOT IN DIRECTORY            | RECORD NUMBER | 839 |
27. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 28 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 28 |               |     |
|  | SECTION 6/ 28 NOT IN DIRECTORY            | RECORD NUMBER | 974 |
28. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 50 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 50 |               |      |
|  | SECTION 6/ 50 NOT IN DIRECTORY            | RECORD NUMBER | 1082 |
29. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 51 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 51 |               |      |
|  | SECTION 6/ 51 NOT IN DIRECTORY            | RECORD NUMBER | 1093 |
30. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 52 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 52 |               |      |
|  | SECTION 6/ 52 NOT IN DIRECTORY            | RECORD NUMBER | 1104 |
31. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 53 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 53  
SECTION 6/ 53 NOT IN DIRECTORY RECORD NUMBER 1115

32. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 54 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 54  
SECTION 6/ 54 NOT IN DIRECTORY RECORD NUMBER 1126

33. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 55 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 55  
SECTION 6/ 55 NOT IN DIRECTORY RECORD NUMBER 1137

34. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 56 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 56  
SECTION 6/ 56 NOT IN DIRECTORY RECORD NUMBER 1148

35. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 57 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 57  
SECTION 6/ 57 NOT IN DIRECTORY RECORD NUMBER 1159

36. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=7425, MF= 6, MT= 91 (0): Directory (b)*

ERROR(S) FOUND IN MAT=7425, MF= 6, MT= 91  
SECTION 6/ 91 NOT IN DIRECTORY RECORD NUMBER 1170

• **fizcon** Errors:

1. Missing files (probably spectra for outgoing particles)  
*MAT -1 MF 6 (1): Missing files (a)*

ERROR(S) - MISSING SECTIONS IN MAT -1 MF 6  
PRESENCE OF FILE 3, MT= 102 REQUIRES AN EQUIVALENT SECTION IN FILE 6  
PRESENCE OF FILE 3, MT= 103 REQUIRES AN EQUIVALENT SECTION IN FILE 6  
PRESENCE OF FILE 3, MT= 104 REQUIRES AN EQUIVALENT SECTION IN FILE 6  
PRESENCE OF FILE 3, MT= 105 REQUIRES AN EQUIVALENT SECTION IN FILE 6  
... [3 more lines]

• **fudge-4.0** Errors:

1. Calculated and tabulated Q values disagree.  
*reaction label 0: n + W179 (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -9235199.664855957 eV vs -8.4121e6 eV!

2. Calculated and tabulated Q values disagree.  
*reaction label 1:  $n + W179\_e1$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9355099.664855957 eV vs -8.532e6 eV!
3. Calculated and tabulated Q values disagree.  
*reaction label 2:  $n + W179\_e2$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9457099.664855957 eV vs -8.634e6 eV!
4. Calculated and tabulated Q values disagree.  
*reaction label 3:  $n + W179\_e3$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9499799.664855957 eV vs -8.6767e6 eV!
5. Calculated and tabulated Q values disagree.  
*reaction label 4:  $n + W179\_e4$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9539999.664855957 eV vs -8.7169e6 eV!
6. Calculated and tabulated Q values disagree.  
*reaction label 5:  $n + W179\_e5$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9544199.664855957 eV vs -8.7211e6 eV!
7. Calculated and tabulated Q values disagree.  
*reaction label 6:  $n + W179\_e6$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9553599.664855957 eV vs -8.7305e6 eV!
8. Calculated and tabulated Q values disagree.  
*reaction label 7:  $n + W179\_e7$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9607999.664855957 eV vs -8.7849e6 eV!
9. Calculated and tabulated Q values disagree.  
*reaction label 8:  $n + W179\_c$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -9607999.664855957 eV vs -8.7849e6 eV!
10. Calculated and tabulated Q values disagree.  
*reaction label 9:  $n[\text{multiplicity:}'2'] + W178$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -16194116.65698242 eV vs -1.535e7 eV!
11. Calculated and tabulated Q values disagree.  
*reaction label 10:  $n[\text{multiplicity:}'3'] + W177$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -24979670.18786621 eV vs -2.4131e7 eV!
12. Calculated and tabulated Q values disagree.  
*reaction label 11:  $n + H1 + Ta178$  (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -15320469.62921143 eV vs -1.4477e7 eV!

13. Calculated and tabulated thresholds don't agree  
*reaction label 12: W180 + gamma / Cross section: (Error # 0): Threshold mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.e6 eV!

14. Calculated and tabulated Q values disagree.  
*reaction label 13: n + He4 + Hf175 (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -6479829.235656738 eV vs -5.6551e6 eV!

15. Calculated and tabulated Q values disagree.  
*reaction label 14: H1[multiplicity:'2'] + Hf178 (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -12601123.03695679 eV vs -1.1779e7 eV!

16. Calculated and tabulated Q values disagree.  
*reaction label 15: H1 + Ta179-s (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -7390100.289978027 eV vs -6.5707e6 eV!

17. Calculated and tabulated Q values disagree.  
*reaction label 16: H2 + Ta178-s (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -13095903.52828979 eV vs -1.2252e7 eV!

18. Calculated and tabulated Q values disagree.  
*reaction label 17: H3 + Ta177-s (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -13693626.32366943 eV vs -1.287e7 eV!

19. Calculated and tabulated Q values disagree.  
*reaction label 18: He3 + Hf177-s (Error # 0): Q mismatch*

WARNING: Calculated and tabulated Q-values disagree: -12509035.53546143 eV vs -1.1687e7 eV!

20. Calculated and tabulated Q values disagree.  
*reaction label 19: He4 + Hf176-s / Cross section: (Error # 0): Q mismatch*

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.e6 eV!

WARNING: Calculated and tabulated Q-values disagree: 1685149.920196533 eV vs 2.5101e6 eV!

- **xsectplotter** Warnings:

1. Encountered runtime warning in xsectplotter or Fudge or matplotlib  
*(Error # 2): RuntimeWarning*

/usr/local/lib/python2.7/site-packages/matplotlib-1.5.3-py2.7-linux-x86\_64.egg/matplotlib/font\_manager.py:273: U  
/usr/local/lib/python2.7/site-packages/matplotlib-1.5.3-py2.7-linux-x86\_64.egg/matplotlib/pyplot.py:524: Runtime

2. Encountered runtime warning in xsectplotter or Fudge or matplotlib  
*/usr/local/lib/python2.7/site-packages/matplotlib-1.5.3-py2.7-linux-x86\_64.egg/matplotlib/pyplot.py:524:  
RuntimeWarning: More than 20 figures have been opened. Figures created through the  
pyplot interface ('matplotlib.pyplot.figure') are retained until explicitly closed and may  
consume too much memory. (To control this warning, see the rcParam 'figure.max\_open\_warning').  
(Error # 0): RuntimeWarning*

max\_open\_warning, RuntimeWarning)